

Safety Attribute Inspection (SAI) Data Collection Tool
1.3.17 Weight and Balance Program (AW)

ELEMENT SUMMARY INFORMATION

Purpose of this Element (certificate holder's responsibility):

- To ensure the aircraft weight and center of gravity are accurately calculated and current records are maintained.

Objective (FAA oversight):

- To determine if the certificate holder's Weight and Balance Program meets all applicable requirements of Title 14 of the Code of the Federal Regulations (14 CFR) and FAA policies.
- To determine if the certificate holder's Weight and Balance Program incorporates the safety attributes.
- To identify any shortfalls in the certificate holder's Weight and Balance Program.

Specific Instructions:

- Intentionally left blank

SUPPLEMENTAL INFORMATION

Specific Regulatory Requirements (SRRs):

- SRRs:
119.43(b)
119.43(b)(1)
119.43(b)(2)
119.43(c)
119.49(a)(9)
119.49(b)(9)
121.135(a)(1)
121.135(b)(1)
121.135(b)(2)
121.135(b)(20)
121.135(b)(3)
E.096a
E.096b
E.096Weight and Balance Control Procedures

Related CFRs & FAA Policy/Guidance:

- Related CFRs:
Intentionally left blank
- FAA Policy/Guidance:
FAA Order 8300.10, Volume 2, Chapter 73
FAA Order 8300.10, Volume 2, Chapter 74
AC-120-27E
HBAT 04-08

SAI SECTION 1 - PROCEDURES ATTRIBUTE

Objective: Procedures, instructions, and information contained in the certificate holder's manual are documented methods for accomplishing a process. Policies contained in the certificate holder's manual should establish the certificate holder's compliance posture. Policies may not be stand-alone statements but may be embedded within procedures, instructions, or information regarding a particular regulatory requirement. The questions in this section of the data collection tool (DCT) are designed to assist the inspector in determining if the certificate holder's manual has documented or prescribed methods of accomplishing the process requirements that provide answers to the associated questions regarding who, what, when, where, and how. This section contains policy questions, procedural questions, and instructional or informational questions pertaining to various types of certificate holder requirements such as actions, prohibitions, or resources (i.e., personnel, facilities, equipment, technical data, etc.).

Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the information listed in the Supplemental Information section of this DCT.
2.	Review the duties and responsibilities for management and other personnel identified by the certificate holder who accomplishes the Weight and Balance Program.
3.	Review the certificate holder's manual to ensure that it contains policies, procedures, instructions, and information necessary for the Weight and Balance Program.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the content of the certificate holder's manual meet the specific regulatory and FAA policy requirements for a Weight and Balance Program:	
1.1.	Does the certificate holder s Weight and Balance Program contain the methods and procedures for: SRRs: 121.135(b)(20); E.096Weight and Balance Control Procedures	
1.1.1	Establishing and maintaining individual aircraft empty weights? SRRs: E.096a	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.1.2	Establishing and maintaining fleet aircraft empty weights? SRRs: E.096b	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.2.	Does the certificate holder s manual contain methods and procedures for weighing all aircraft in accordance with: SRRs: 121.135(b)(20)	
1.2.1	Established individual aircraft weights outlined in the Weight and Balance Program? SRRs: E.096a <i>Related Design JTIs:</i> 1. Check that the Certificate Holder's manual system includes instructions and information necessary to allow personnel concerned to perform the duty and responsibility of weighing their aircraft in accordance with the procedures established for individual aircraft weights outlined in the operator's weight and balance control program. Sources: 121.135(a)(1); E.096(d) Interfaces: 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW);	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable

	1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)	
1.2.2	<p>Established fleet aircraft weights outlined in the Weight and Balance Program?</p> <p>SRRs: E.096b</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system includes instructions and information necessary to allow personnel concerned to perform the duty and responsibility of weighing their aircraft in accordance with the procedures established for fleet aircraft weights outlined in the operator's weight and balance control program.</p> <p>Sources: 121.135(a)(1); E.096(d)</p> <p>Interfaces: 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.3.	<p>Does the certificate holder's manual contain methods and procedures for maintaining the aircraft weight and center of gravity (CG) within approved limits?</p> <p>SRRs: 121.135(b)(20)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.4.	<p>Does the certificate holder's operations specifications contain the method of controlling the weight and balance of the aircraft?</p> <p>SRRs: 119.49(a)(9); 119.49(b)(9); E.096Weight and Balance Control Procedures</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.5.	<p>Does the certificate holder's Weight and Balance Program comply with the guidance contained in FAA Order 8300.10?</p> <p><i>Related Design JTIs:</i></p> <p>1. Check that the Certificate Holder's manual system contains procedures to substantiate that its weight and balance program is amended to accommodate leased aircraft if they intend to maintain it in accordance with the lessor's program.</p> <p>Sources: 8300.10, Volume 2, Chapter 73, Section 1, Paragraph 7(8) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p>Interfaces: 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.5(OP); 3.1.8(OP); 3.1.9(OP); 3.1.11(OP); 3.2.2(OP); 4.2.3(OP); 4.2.5(OP); 4.2.6(OP); 5.1.1(AW)</p> <p>2. Check that the Certificate Holder's manual system contains procedures that under a short term lease arrangement using the lessor's maintenance program, the lessee has the current weight and balance data for any leased aircraft.</p> <p>Sources: 8300.10, Volume 2, Chapter 73, Section 2, Paragraph 5(A)4 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p>Interfaces: 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.5(OP); 3.1.8(OP); 3.1.9(OP); 3.1.11(OP); 3.2.2(OP); 4.2.3(OP); 4.2.5(OP); 4.2.6(OP); 5.1.1(AW)</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	<p>3. Check that the Certificate Holder's manual system includes approved methods or procedures for periodically re-weighing and data reevaluation of their aircraft.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 5B 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.8(OP); 3.1.9(OP); 3.1.11(OP); 3.2.2(OP); 4.2.5(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>4. Check that the Certificate Holder's manual system includes approved methods or procedures for aircraft so they will not exceed the authorized weight and balance limitations during all ground and flight operations.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 1 Paragraph 5B</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>5. Check that the Certificate Holder's manual system includes approved methods or procedures for monitoring aircraft individual or fleet empty weight, and CG to have its data recalculated, if changes necessitate.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 1 Paragraph 5B 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>6. Check that the Certificate Holder's manual system contains procedures for weighing aircraft at intervals approved by the PMI.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13A(2) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p><i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.9(OP); 3.1.11(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW)</p> <p>7. Check that the Certificate Holder's manual system contains procedures for the initial weighing of aircraft.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p> <p>8. Check that the Certificate Holder's manual system contains procedures for use of fleet weights if authorized by OpSpecs.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 1 Paragraph 13B(1) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>9. Check that the Certificate Holder's manual system contains procedures</p>	
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	<p>that a fleet generally is considered to be three or more aircraft of the same model and configuration and when aircraft are operating under fleet weights, they must be weighed in accordance with the operator/applicant's instructions. The operating weights and CG position must be within established limits.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 1 Paragraph 13B(1) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p>	
10.	<p>Check that the Certificate Holder's manual system contains procedures that when aircraft are operating under fleet weights, the operating weights and CG position must be within established limits.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 1 Paragraph 13B(1) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p>	
11.	<p>Check that the Certificate Holder's manual system contains procedures for determining empty fleet weight by averaging aircraft weights as referenced in 8300.10, Volume 2, Chapter 74, Section, Paragraph 13B(2).</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13B(2) 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B (8)</p> <p><i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.9(OP); 3.1.11(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW)</p>	
12.	<p>Check that the Certificate Holder's manual system contains procedures for pre-weighing instructions and requirements to be met.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p>	
13.	<p>Check that the Certificate Holder's manual system contains procedures for establishing and maintaining equipment lists for each aircraft.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p>	
14.	<p>Check that the Certificate Holder's manual system contains procedures for recording the airplane weight, residual fluids, scale tare weights and type and serial number for each scale used.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p>	

	<p>15. Check that the Certificate Holder's manual system contains procedures for ensuring aircraft are configured in accordance with approved data. <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8) <i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p> <p>16. Check that the Certificate Holder's manual system contains procedures for determining standards and schedules for calibration of aircraft scales. <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8) <i>Interfaces:</i> 1.1.1(AW); 1.3.7(AW); 1.3.8(AW); 1.3.14(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.6(AW)</p> <p>17. Check that the Certificate Holder's manual system contains procedures that scales used to weigh aircraft are calibrated and traceable to a national standard. <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13C AC 120-27D <i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.5(OP); 3.1.11(OP); 4.2.6(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>18. Check that the Certificate Holder's manual system contains procedures to use scales that are properly calibrated, zeroed, and used in accordance with the manufacturer's instructions. <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13C AC 120-27D <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>19. Check that the Certificate Holder's manual system contains procedures to have scales periodically calibrated either by the manufacturer or in accordance with the civil authority for weights and measures having jurisdiction over the area in which the scales are used, as recommended in the manufacturer's calibration schedule. <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13C AC 120-27D <i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.5(OP); 3.1.11(OP); 4.2.6(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>20. Check that the Certificate Holder's manual system contains procedures for the frequency of testing of their scales, which depends on use and handling. (If a calibration schedule is not available from the manufacturer, the it is acceptable to use the scale to weigh the aircraft within one year after the calibration of the scale. The operator should have evidence that would justify a safety determination for accepting a longer period between calibrations). <i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 1, Paragraph 13C AC 120-27D Paragraph 7 f <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW);</p>	
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	<p>2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>21. Check that the Certificate Holder's manual system contains procedures that if they utilize a contractor to weigh items, the contractor complies with Certificate Holder's approved weight and balance control program, including calibration and testing of scales.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 15 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(8)</p> <p><i>Interfaces:</i> 1.3.7(AW); 1.3.8(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.5(OP); 3.1.11(OP); 4.2.6(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>22. Check that the Certificate Holder's manual system contains procedures to include a description of the organization unit responsible for the control and maintenance of the weight and balance program to include lines of authority and support structure.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(4)</p> <p><i>Interfaces:</i> 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.11(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>23. Check that the Certificate Holder's manual system contains procedures to include the levels of authority for the weight and balance program.</p> <p><i>Sources:</i> 8300.10 Volume 2, Chapter 74, Section 2, Paragraph 5B(4)</p> <p><i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>24. Check that the Certificate Holder's manual system contains procedures to include job descriptions for all elements.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(5)</p> <p><i>Interfaces:</i> 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.11(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>25. Check that the Certificate Holder's manual system contains procedures for a training program, which includes maintenance, operations, dispatch and ground handling personnel.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(6)</p> <p><i>Interfaces:</i> 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.11(OP); 4.2.1(AW); 4.2.3(OP); 4.2.5(OP); 4.2.6(OP); 7.1.1(AW); 7.1.2(AW)</p> <p>26. Check that the Certificate Holder's manual system contains procedures for a training program that includes documentation and retention of individual training records.</p> <p><i>Sources:</i> 8300.10, Volume 2, Chapter 74, Section 2, Paragraph 5B(7)</p> <p><i>Interfaces:</i> 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.1.11(OP); 4.2.1(AW); 4.2.3(OP); 4.2.5(OP); 4.2.6(OP); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)</p> <p>27. Check that the Certificate Holder's manual system contains procedures for aircraft being weighed at international maintenance facilities to use scales that are traceable to NITS.</p> <p><i>Sources:</i> Safety</p>	
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	<i>Interfaces: 1.3.1(AW); 1.3.7(AW); 1.3.14(AW); 3.2.2(OP)</i>	
1.6.	Does the certificate holder's Weight and Balance Program comply with the guidance contained in AC-120-27E?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.7.	Does the certificate holder's Weight and Balance Program comply with the guidance contained in FAA Flight Standards Handbook Bulletin 04-08?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.8.	Does the certificate holder's manual contain the required references to, or excerpts from, operations specification, paragraph E096? SRRs: 119.43(b)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.9.	If the certificate holder's manual includes excerpts from its operations specifications, are the excerpts clearly identified as part of its operations specifications? SRRs: 119.43(b)(1)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.10.	Does the certificate holder's manual require compliance with operations specifications, paragraph E096? SRRs: 119.43(b)(2)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.11.	Does the certificate holder's manual contain a method for keeping all persons engaged in its operations informed of the provisions of operations specifications, paragraph E096? SRRs: 119.43(c)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	<p>Does the certificate holder's manual contain general policies for the Weight and Balance Program that comply with the SRRs? SRRs: 121.135(b)(1); 121.135(b)(20); E.096Weight and Balance Control Procedures</p> <p><i>Related Design JTIs:</i></p> <ol style="list-style-type: none"> 1. Check that the Certificate Holder's manual system contains a general policy for weighing aircraft in accordance with the procedures for establishing individual aircraft weights as outlined in the operator's weight and balance control program. <i>Sources:</i> 121.135(b)(1); E.096(d) <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW) 2. Check that the Certificate Holder's manual system contains a general policy for weighing aircraft in accordance with the procedures for establishing fleet aircraft weights as outlined in the operator's weight and balance control program. <i>Sources:</i> 121.135(b)(1); E.096(d) <i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW) 3. Check that the Certificate Holder's manual system contains a general policy regarding the use of an approved weight and balance control system based on average, assumed, or estimated weight to comply with applicable airworthiness requirements and operating limitations. <i>Sources:</i> 121.135(b)(1); 121.153(b) 	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	<i>Interfaces:</i> 1.1.1(AW); 1.1.2(AW); 1.1.2(OP); 1.2.2(AW); 1.3.7(AW); 1.3.9(AW); 2.1.1(AW); 2.1.1(OP); 2.1.2(AW); 2.1.2(OP); 2.1.3(AW); 2.1.3(OP); 2.1.4(AW); 2.1.4(OP); 2.1.5(AW); 2.1.5(OP); 3.2.2(OP); 4.2.1(AW); 7.1.1(AW); 7.1.2(AW); 7.1.3(AW); 7.1.3(OP); 7.1.4(OP); 7.1.5(OP); 7.1.6(AW)	
3.	Does the certificate holder's manual reference the appropriate Federal Aviation Regulations listed in the Supplemental Information section of this safety attribute inspection (SAI)? SRRs: 121.135(b)(3)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Does the certificate holder's manual contain the duties and responsibilities for personnel who will accomplish the Weight and Balance Program? SRRs: 121.135(b)(2)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	Does the certificate holder's manual include instructions and information for personnel to meet the requirements of the Weight and Balance Program? SRRs: 121.135(a)(1)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

SAI SECTION 1 - PROCEDURES ATTRIBUTE Drop-Down Menu	
1.	No procedures, policy, instructions or information specified.
2.	Procedures or instructions and information do not identify (who, what, when, where, how).
3.	Procedures, policy or instructions and information do not comply with CFR.
4.	Procedures, policy or instructions and information do not comply with FAA policy and guidance.
5.	Procedures, policy or instructions and information do not comply with other documentation (e.g., manufacturer's data, Jeppesen's Charts, etc.).
6.	Procedures, policy or instructions and information unclear or incomplete.
7.	Documentation quality (e.g., unreadable or illegible).
8.	Procedures, policy or instructions and information inconsistent across Certificate Holder manuals (FOM - Flight Operations Manual to GMM - General Maintenance Manual, etc.).
9.	Procedures, policy or instructions and information inconsistent across media (e.g., paper, microfiche, electronic).
10.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
11.	Other.

SAI SECTION 2 - CONTROLS ATTRIBUTE

Objective: Controls are checks and restraints designed into a process to ensure a desired result. The questions in this section of the DCT are designed to assist the inspector in determining if checks and restraints are designed into the process to ensure the desired result is achieved. Controls should be written into the manual system to ensure that the most important manual policies, procedures or instructions, and information will be followed.

Controls may be in the form of administrative controls, which are secondary or supplemental written procedures. Like written procedures, administrative controls also need to provide answers to questions regarding who, what, when, where, and how. Controls may also be in the form of engineered controls, such as automated features or mechanical actions or devices (i.e., safety devices, warning devices, etc.).

Tasks

To meet this objective, the inspector must accomplish the following tasks:

1. Review the control questions below.
2. Review the certificate holder's policies, procedures, instructions, and information, to gain an understanding of the controls that it has documented.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Are the following controls built into the Weight and Balance Program:	
1.1	Is there a control or controls in place to ensure aircraft are configured to the certificate holder's current equipment list before weighing the aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.2	Is there a control or controls in place to ensure the pre-weighing instructions and requirements were complete before weighing the aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.3	Is there a control or controls in place to ensure that the calibrated equipment used to weigh the aircraft meet the certificate holder's inspection program procedures, standards and limits for the periodic inspection and calibration of precision tool, measuring devices, and test equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.4.	Is there a control or controls in place to ensure that aircraft are accurately weighed, and the weight and center of gravity accurately calculated?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.5.	Is there a control or controls in place to ensure the aircraft are weighed at the intervals specified in the certificate holder's time limitations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.6.	Is there a control or controls in place to ensure personnel are trained on the methods and techniques for weighing the the certificate holder's aircraft and calculating the weight and center of gravity?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.7.	Is there a control or controls in place to ensure the certificate holder maintains a complete, current, and continuous weight and balance record of alterations and changes affecting either the weight and/or center of gravity of the aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.8.	Is there a control or controls in place to ensure the certificate holder reestablishes the weight and center of gravity when the cumulative change was more than plus or minus one-half of 1 percent (0.5 percent) of the maximum landing weight, or whenever the cumulative change in the CG position exceeded one-half of 1 percent (0.5 percent) of the mean aerodynamic chord (MAC)?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.9.	Is there a control or controls in place to ensure the certificate holder properly	<input type="checkbox"/> Yes

	rotates all aircraft when using periodic fleet weights to weigh their aircraft?	<input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.10.	Is there a control or controls in place to ensure that when an aircraft is added to the fleet, the certificate holder has the initial empty weight and CG established in accordance with its procedures?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.11.	Is there a control or controls in place to ensure that the certificate holder amends its Weight and Balance Program to accommodate leased aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.12.	Is there a control or controls in place to ensure that the certificate holder has aircraft specific weight and balance information available for use by flight crews and dispatch?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.13.	Does the certificate holder have a documented method for assessing the impact of any changes made to the controls in the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable

SAI SECTION 2 - CONTROLS ATTRIBUTE Drop-Down Menu	
1.	No controls specified.
2.	Documentation for the controls do not identify (who, what, when, where, how).
3.	Controls incomplete.
4.	Controls could be circumvented.
5.	Controls could be unenforceable.
6.	Resource requirements incomplete (personnel, facilities, equipment, technical data).
7.	Other.

SAI SECTION 3 - PROCESS MEASUREMENT ATTRIBUTE

Objective: Process measurements are used by the certificate holder to measure and to assess its processes, to identify and to correct problems or potential problems, and to make improvements to the processes. The questions in this section of the DCT are designed to assist the inspector in determining if the certificate holder measures or assesses information to identify, analyze, and document potential problems with the process. Process measurements are a certificate holder's internal evaluation or auditing of the most important policies, procedures or instructions, and information associated with an element.

To prevent the duplication of work, process measurements are most commonly addressed through a combination of auditing features contained in both the certificate holder's safety program/internal evaluation program (for operations and cabin safety-related issues) and the auditing function of the Continuous Analysis and Surveillance System (for airworthiness or maintenance/inspection-related issues). The director of safety and the quality assurance department often work together to accomplish this function for the certificate holder. This approach requires amendment of the safety program/internal evaluation program audit forms or checklists, and the Continuous Analysis and Surveillance System audit forms or checklists to include the specific process measurements for each element.

Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the process measurement questions below.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the process measurements that it has documented.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's Weight and Balance Program include the following process measurements:	
1.1.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure the aircraft was configured to its current equipment list before weighing the aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.2.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure the pre-weighing instructions and requirements were complete before weighing the aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.3.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure that the calibrated equipment used to weigh the aircraft met their inspection program procedures, standards and limits for the periodic inspection and calibration of precision tool, measuring devices and test equipment?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.4.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure aircraft were accurately weighed and the weight and center of gravity accurately calculated?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.5.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure aircraft were weighed at the intervals specified in their time limitations?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.6.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure personnel were trained on the methods	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

	and techniques for weighing the certificate holder's aircraft and calculating the weight and center of gravity?	
1.7.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure a complete, current, and continuous weight and balance record of alterations and changes affecting either the weight and/or center of gravity of the aircraft was maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.8.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to ensure the weight and center of gravity was reestablished when the cumulative change was more than plus or minus one-half of 1 percent (0.5 percent) of the maximum landing weight, or whenever the cumulative change in the CG position exceeded one-half of 1 percent (0.5 percent) of the mean aerodynamic chord (MAC)?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.9.	Is there a process measurement or process measurements that would reveal if the certificate holder failed to properly rotate all aircraft when using periodic fleet weights to weigh their aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.10.	Is there a process measurement or process measurements that would identify if the certificate holder failed to amend its Weight and Balance Program to accommodate leased aircraft?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain <input type="checkbox"/> Not Applicable
1.11.	Is there a process measurement or process measurements that would identify if the certificate holder failed to have the initial empty weight and CG established in accordance with their procedures when an aircraft was added to the fleet?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
1.12.	Is there a process measurement or process measurements that would identify if when the certificate holder failed to provide aircraft specific weight and balance information to be used by flight crews and dispatch?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Is there a process measurement or process measurements that would reveal if the certificate holder's policy, procedures, instructions, and information contained in its manual were not followed?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
3.	Does the certificate holder document its process measurement methods and results?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Does the certificate holder's manual provide for the use of process measurement results to improve its programs?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	Does the organization that conducts the process measurements have direct access to the person with responsibility for the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

SAI SECTION 3 - PROCESS MEASUREMENT ATTRIBUTE Drop-Down Menu	
1.	No process measurements specified.
2.	Documentation for the process measurements does not identify (who, what, when, where, how).
3.	Inability to identify negative findings.
4.	No provisions for implementing corrective actions.
5.	Ineffective follow-up to determine effectiveness of corrective actions.
6.	Resources requirements (personnel, facilities, equipment, technical data).
7.	Other.

SAI SECTION 4 - INTERFACES ATTRIBUTE

Objective: Interfaces are used by the certificate holder to identify and to manage the interactions between processes. The questions in this section of the DCT are designed to assist the inspector in determining whether or not interactions between the policies, procedures or instructions, and information associated with other independent processes within the certificate holder's organization are documented. Written policies, procedures or instructions, and information that are interrelated and located in different manuals within the certificate holder's manual system must be consistent and complement each other. For the interfaces to be effectively managed, it is not only important to identify what the interfaces are, but it is imperative to document the specific location of the interfaces within the certificate holder's manual system.

Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Review the interfaces associated with the Weight and Balance Program that have been identified along with the individual questions in the Procedures section (1) of this DCT.
2.	Review the certificate holder's policies, procedures, instructions, and information to gain an understanding of the interfaces that it has documented.

Questions

	To meet this objective, the inspector must answer the following questions: Note: The design job task items (JTIs) displayed with the questions in section 1, Procedures, of this DCT identify potential interfaces (by element number) for this element.	
1.	Does the certificate holder's manual properly address the interfaces that are identified along with the individual questions in the Procedures section (1)?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
2.	Does the certificate holder's manual document a method for assessing the impact of any changes to the associated interfaces within the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

SAI SECTION 4 - INTERFACES ATTRIBUTE Drop-Down Menu	
1.	No interfaces specified.
2.	The following interfaces not identified within the Certificate Holder's manual system:
3.	Interfaces listed are inaccurate.
4.	Specific location of interfaces not identified within the manual system.
5.	Other

SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTES

Objective: The questions in this section of the DCT address the responsibility and authority of the process. They are designed to assist the inspector in determining if there is a clearly identifiable, qualified, and knowledgeable person who is responsible for the process, is answerable for the quality of the process, and has the authority to establish and modify the process. (The person with the authority may or may not be the person with the responsibility.)

Tasks

	To meet this objective, the inspector must accomplish the following tasks:
1.	Identify the person who has overall responsibility for the Weight and Balance Program.
2.	Identify the person who has overall authority for the Weight and Balance Program.
3.	Review the duties and responsibilities of the person(s), documented in the certificate holder's manual.
4.	Review the appropriate organizational chart.

Questions

	To meet this objective, the inspector must answer the following questions:	
1.	Does the certificate holder's manual clearly identify who is responsible for the quality of the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain Name/Title:
2.	Does the certificate holder's manual clearly identify who has authority to establish and modify the policies, procedures, instructions and information for the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain Name/Title:
3.	Does the certificate holder's manual include the duties and responsibilities of those who manage work required by the Weight and Balance Program? SRRs: 121.135(b)(2)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
4.	Does the certificate holder's manual include instructions and information for those who manage the work required by the Weight and Balance Program? SRRs: 121.135(a)(1)	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
5.	Does the certificate holder's manual clearly and completely document the responsibility for this position?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
6.	Does the certificate holder's manual clearly and completely document the authority for this position?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
7.	Does the certificate holder's manual clearly and completely document their qualification standards for the person having responsibility for the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
8.	Does the certificate holder's manual clearly and completely document their qualification standards for the person having authority to establish and modify the certificate holder's policies, procedures, instructions, and information for the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain
9.	Does the certificate holder's manual clearly and completely document the procedures for delegation of authority for the Weight and Balance Program?	<input type="checkbox"/> Yes <input type="checkbox"/> No, Explain

SAI SECTION 5 - MANAGEMENT RESPONSIBILITY & AUTHORITY ATTRIBUTES Drop-Down Menu	
1.	Not documented.
2.	Documentation unclear.
3.	Documentation incomplete.
4.	Other.